

ABSTRACT

A substrate processing apparatus has a chamber having a substrate support, gas distributor, gas energizer, and gas exhaust port. A process monitor is provided to monitor features in a first region of the substrate and generate a corresponding first signal, and to monitor features in a second region of the substrate and generate a second signal. A chamber controller receives and evaluates the first and second signals, and operates the chamber in relation to the signals. For example, the chamber controller can select a process recipe depending upon the signal values. The chamber controller can also set a process parameter at a first level in a first processing sector and at a second level in a second processing sector. The apparatus provides a closed control loop to independently monitor and control processing of features at different regions of the substrate.